

**Productivity Improvements  
With a New Vapor Degreasing Cleaning Process  
At Williams International**

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Williams International, a manufacturer of jet engines for the military in applications, such as cruise missiles, and civilian markets, with engines such as the new EJ-22 turbofan engine, has implemented a new cleaning process. This paper will explore the decision-making process that manufacturing personnel used in selecting vapor degreasing with a normal propyl bromide (nPB)/isopropyl alcohol (IPA) azeotrope. The significant increase in productivity that the new cleaning process has produced over the old aqueous cleaning process will be explored, as will details of the operation and maintenance of the new system.

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